Listing of the Claims

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

1-36. (Canceled)

37.   (Previously presented) A method of diagnosing mild osteoarthritis in a human test individual, said method comprising:

for each gene of the set of genes consisting of TNFAIP6 and TGFBI,

(a) determining the level of expression of RNA encoded by said gene in a cartilage sample of said individual; and

(b) comparing said level with the level of expression of RNA encoded by said gene in control cartilage samples, wherein said control samples are from individuals who have been diagnosed as not having osteoarthritis;

whereby a difference between said level of step (a) and said level of expression of said RNA in said control samples is indicative of mild osteoarthritis.

38.   (Currently Amended) A method of diagnosing mild osteoarthritis in a human test individual, said method comprising:

(a) for each gene of a set of genes, wherein said set of genes consists of TNFAIP6 and TGFBI, determining a level of expression of RNA encoded by said gene in a cartilage sample of said test individual;

(b) for each gene of said set of genes, comparing the level of expression of said RNA in said sample of said test individual with a level of expression of RNA encoded by said gene in control cartilage samples obtained from each of: a population of human individuals not having osteoarthritis; a population of human individuals having mild osteoarthritis according to the Marshall scoring system; a population of human individuals having moderate osteoarthritis according to the Marshall scoring system; a population of human individuals having marked osteoarthritis according to the Marshall scoring system; and a population of human individuals having severe osteoarthritis according to the Marshall scoring system; and

(c) determining a difference in said levels of expression as between RNA encoded by said genes in said sample of said test individual and RNA encoded by said genes in said samples from said control populations such that said test individual is classified as having mild osteoarthritis;

thereby diagnosing said test individual as having mild osteoarthritis.

39.-70 (Canceled)